




 **ELEMENT 13**
Next Generation Tank Products

Specification for Internal Floating Roofs

SP-I-1302

Rev	Date	Prepared By	Checker Approval	Operations Approval	Management Approval
C	Oct/2022	KHP	CB	KRK	BEL

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1. Deck Skin

- A. Typical ultimate tensile strength:
23 KSI (1620 kg/cm²)
- B. Thickness: 0.025" (0.635mm)
- C. U.S. Standard: AA 3003 H14
- D. A.S.T.M. B-209

2. Pontoon Flotation Members

- A. Typical ultimate tension strength:
42 KSI (2051 kg/cm²)
- B. Outside diameter: 8" or 10" (203 or 254mm)
- C. Wall thickness: 0.051" (1.30mm)
- D. Type: seam welded tube
- E. End closure and ear thickness: 0.125" (3.18mm)
- F. U.S. Standard: AA 3004 H36 (tube & end)
- H. A.S.T.M. B-209
- I. Welding procedure: TIG
- J. Quality control: individually shop leak tested at 5 psi (2.4s kg/cm²)

3. Deck Skin Support Beams


- A. Typical ultimate tensile strength:
45 KSI (3160 kg/cm²)
- B. U.S. Standard: AA 6005A T5
- C. A.S.T.M. B-221 74

4. Support Legs and Extruded Section

- A. Typical ultimate tensile strength:
45 KSI 3160 kg/cm²)
- B. Outside diameter: 1.9" (48.3mm)
- C. Wall thickness: 0.062" (1.57mm)
- D. U.S. Standard: AA 6005A T5
- E. A.S.T.M. B-221 74

5. Rim Plate

- A. Typical ultimate tensile strength:
35 KSI (2460 kg/cm²)
- B. Rim Section: channel 12" (305mm) vertical leg, 3" (76.2mm) horizontal leg
- C. Thickness: 0.125" (3.175mm) rim plate
- D. U.S. Standard: AA 5052 H32 or 6005A T5
- E. A.S.T.M. B-209

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6. Static Ground Cables

- A. Material: 304 stainless steel, 1/8" (3.2mm) dia.
- B. Resistance: 0.031 ohms/ft (0.102 ohms/m)

7. Anti-Rotation Cable

- A. Material: 304 stainless steel, 1/4" (6.4mm) dia.
- B. Typical breaking strength: 6,400 pounds (2,900 kg)

8. Fasteners

All fasteners 304 stainless steel. Typical tensile strength: 92 KSI (5200 kg/cm²)

9. Cover To Shell Seal

Wiper Seal (For Hydrocarbon and Chemical Applications)

Typical composition: PVC-nitrile blend or Extruded Polyurethane

Mechanical Shoe Seal

Swing Arm type stainless steel (304), 18Ga Teflon vapor barrier.

10. Peripheral Roof Vent [optional]

Typical material: Aluminum or fiber glass with UV outer coating available.

END OF SPECIFICATION